DYMITROWSKA, Maria; PREGOWSKI, Wladyslaw; OMULECKA, Danuta; KAZANOWSKA, Wanda

Results of combined antibacterial and ACTH therapy of experimental ocular tuberculosis in rabbits. Klin.oczna 30 no.4:329-344 '60.

1. Z Kliniki Okulistycznej, Kierownik: prof.dr med. M.Dymitrowska; Z Kliniki Gruslicy Pluc, Kierownik: doc. dr med. W.Pregowski; Z pracowni Kliniki Poloznicze-ginekol. A.M. w Bialymstoku, Kierownik: prof. dr med. S.Soszka.

(CORTICOTROPIN pharmacol)
(ANTITUBERCULAR AGENTS pharmacol)
(TUBERCULOSIS OCULAR exper)

DYMKIN, A.M.; SOLOMTSEV, L.F.; ELLERN, S.S.

Some new data on the rocks of the diabasic formation in the east of the Russian Platform. Dokl. AN SSSR 109 no.1:173-175 Jl-Ag'56. (MLRA 9:10)

1. Geologicheskiy institut Kazanskogo filiala Akademii nauk i Kazanskiy gosudarstvennyy universitet imeni V.I. Ul'yanova-Lenina. Predstavleno akademikom S.I. Mironovym.

(Russian Platform--Diabase)

DYMKIN, A.M.

Scapolitization of igneous rocks. Uch.zap.Kaz.un. 115 no.16:225-228 '56. (MLRA 10:3)

1. Kafedra poleznykh iskopayemykh i razvedochnogo dela.
(Scapolite)

DYMKIN, A.M.; ELLERN, S.S.

Diabases from Grakhovo District, Udmurt A.S.S.R. Uch.zap.Kaz.un. 116 no.5:206-208 '56. (MLRA 10:4)

1. Kafedra poleznykh iskopayemykh.
(Grakhovo District--Diabase)

15-57-12-17224

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 12, p 72 (USSR)

AUTHOR: Dymkin, A. M.

TITLE: The Petrographic Characteristics and Peculiarities of Mineralization in the Kacha Deposit (Turgay Lowland) /Petrograficheskaya kharakteristika i osobennosti mineralizatsii Kacharskogo mestorozhdeniya (Turgayskaya nizmennost')/

PERIODICAL: Uch. zap. Kazansk. un-ta, 1956, Vol 116, Nr 12, pp 153-194

ABSTRACT: The Paleozoic folded basement, containing the ore bodies, is overlain by a cover of Mesozoic and Cenozoic sediments upto 140 m or 180 m thick. The mineralization occurred in Paleozoic time. Three series of Paleozoic sedimentary-volcanic rocks may be clearly distinguished: a pyroclastic series, a

Card 1/6

The Petrographic Characteristics (Cont.)

porphyritic series, and an ore-host series (limestones, albitophyres, tuffs and tuff-breccias, orthophyres, plagioclase porphyrites and their tuffs). The entire sequence of sedimentary-volcanic rocks in the eastern part of the deposit is cut by pre-ore leucocratic granite porphyries. The chemical analyses of four samples of the granite porphyries are given in the table (in percent). Post-ore intrusive rocks occur only as dikes. Of these, diabase porphyrite is the must abundant, albitophyre less so, and orthophyre least abundant (until the present, one occurrence has been recognized). The intrusion of granite porphyries into the sequence of sedimentary-volcanic rocks produced considerable changes in the host rocks: simple recrystallization and formation of hornfels and marble on the one hand, development of metasomatic rocks (scapolite, scapolite-albite, actinolite, epodote-albite, and other varieties) on the other. Pyroxene and garnet skarns are not abundant in the Kacharskiy deposit. All the metasomatic rocks are closely associated spatially and genetically with magnetite ores. According to conditions of

The Petrographic Characteristics (Cont.)

formation, primary magnetite ores and oxidized martite ores are distinguished. According to mineral content, there are massive magnetite ores, martite ores, scapolite-magnetite ores, albite-magnetite ores, zeolite-magnetite ores, and ore skarns. Texturally there are massive (dense), powdery, spongy, disseminated (uniformly disseminated, irregularly disseminated), banded, and vein-network ores. Three principal stages of mineralization are recognized: 1) pre-ore (development of hornfels and marble), 2) ore (metasomatic, high and low temperature), 3) post-ore (metasomatic, low temperature). The author notes some peculiarities in the behavior of the important chemical elements of the metasomatic rocks in the deposit at various stages of their formation. In the earliest and high temperature scapolite stage, the post-magmatic solutions contained considerable quantities of Fe, Cl, and Na, and moderate amounts of Ti, V. P. F. and S. The skarn stage of mineralization was marked by a sharp decrease in the concentrations of Fe, Ti, V. and Cl in the solutions. The medium-temperature and, especially, the low

The Petrographic Characteristics (Cont.)

temperature stages were characterized by the accumulation of Ca, Si, and S in the solutions. The mineralization was confined to the western contact of the granite-porphyry intrusives against the sedimentary-volcanic sequence of Visean age. Segregations of magnetite formed at the same time as the scapolite and somewhat later. Skarn deposits in the Kacharskiy deposit are extremely small, a fact that distinguishes this deposit from the other contact-metasomatic deposits of the Turgay iron-ore province.

15-57-12-17224

The Petrographic Characteristics (Cont.)

Components	1	2	3	4
SiO_2	74.54	75.56	70.60	74.13
TiO_2	0.21	0.20	0.24	0.26
Al_2O_3	14.12	11.70	14.40	13.96
Fe_2O_3	1.62	1.81	1.23	0.15
FeO	0.59	1.04	1.54	1.33
MnO	0.14	0.01	0.06	0.05
MgO	0.41	0.54	0.35	0.16
CaO	0.59	0.52	1.20	0.34
Na_2O	2.53	2.44	4.49	4.83
K_2O	3.66	4.42	2.46	4.16

Card 5/6

15-57-12-17224

The Petrographic Characteristics (Cont.)

P_2O_5	0.04	0.05	--	--
S	0.04	0.08	--	--
CO_2	0.36	0.56	1.82	0.24
H_2O	1.97	1.00	2.63	0.51
Total	100.82	99.93	101.47	100.12

1) From a depth of 351.5 m, 2) from about 425.9 m, 3) from about 345.0 m 4) from about 196.7 m.

Card 6/6

S. P. Bryzgalina

VINOKUROV, V.M.; DYMKIN, A.M.

New type of contact metamorphosis in the Bakal ore deposit. Uch. zap. Kaz. un. 117 no.9:321-326 '57. (MIRA 13:1)

1.Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina. Kafedra mineralogii i petrografii i kafedra poleznykh iskopayemykh.
(Bakal region--Rocks)

DYMKIN, A.M.; VASIL'YEVA, A.I.

Some characteristics of the distribution of impurity elements in principal ore minerals of the Aleshinsk magnetite deposit (Turgay trough). Geol.i geofiz. no.8:75-81 '61. (MIRA 14:9)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

(Turgay gates—Mineralogical chemistry)

DYMKIN, Aleksandr Mikhaylovich; POSPELOV, G.L., kand. geol.-miner. nauk, otv. red.; OMBYSH-KUZNETSOV, S.O., red.; VYALYKH, A.M., tekhn. red.; LOKSHINA, O.A., tekhn. red.

[Contact-metasomatic iron deposits in the southern part of the Main run in Turgay]Kontaktovo-metasomaticheskie mesto-rozhdeniia zheleza iuzhnoi chasti Glavnoi rudnoi polosy Turgaia. Novisibirsk, Izd-vo Sibirskogo otd-niia AN SSSR, 1962. 236 p. (MIRA 16:4)
(Turgay Gates--Iron ores)

DYNKIN, A.M.; TETYAEV, G.M.; PIUNOV, N.G.

Basic characteristics of the distribution of magnetite deposits of Turgay. Vest. AN Kazakh. SR 20 no.12:25-34 D '64
(MIRA 18:2)

DYMKIN, A.M.; VASIL'YEVA, A.I.

Magnesioferrite in the ores of the Teyskoye deposit. Geol. i geofiz. no.9:126-128 '64. (MIRA 18:7)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

DYMKIN, A.M.; SOKOLOV, G.A.

Colloform formation of the endogenous magnetite in the Kurzhunkul' iron ore deposit. Geol. i geofiz. no.1:77-85 '61. (MIRA 14:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

(Turgay gates--Magnetite)

DYMKO, YE. F.

Dymko, Ye. F.

"A Study of the Effectiveness of Certain Methods of Treating Pneumonia of Calves." Min Higher Education USSR, Alma-Ata Zooveterinary Inst. Alma-Ata Zooveterinary Inst. Alma-Ata, 1955 (Dissertation for the degree of Candidate in Veterinary Sciences)

SO: Knizhnaya letopis' No. 27, 2 July 1955

USSR / General Problems of Pathology. The Patho- U
physiology of the Infectious Process.

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102482.

Author : Karasev, P. A.; Dymko, Ye. F.
Inst : Alma-Ata Zooveterinary Institute.
Title : The Influence of Neurotropic Substances on the Organism of Sheep Infected with Brucellosis in Dependence on the Place of Introduction of a Stimulant.

Orig Pub: Tr. Alma-Atinsk. zoovet. in-ta, 1956, 9, 251-255.

Abstract: No abstract.

Card 1/1

KARASEV, P.A., prof.; DYMKO, Ye.F., kand.vet.nauk

Influence on healthy sheep of a biogenic stimulator prepared according to V.P.Filatov's method. Trudy AZVI 10:359-362 '57. (MIRA 12:8)

1. Iz kafedry patologicheskoy fiziologii (zav.kafedroy - doktor prof. P.A.Karasev) Alma-Atinskogo zoovetinstituta.
(Tissue extracts)

KARASEV, P.A., prof.; DYMKO, Ye.F., kand.vet.nauk

Clarification of the significance of sheep allergically reacting to brucellosis in the dynamics of the development of this disease in the economy. Trudy AZVI 10:375-378 '57. (MIRA 12:8)

1. Iz kafedry patologicheskoy fiziologii (zav.kafedroy - doktor prof. P.A.Karasev) Alma-Atinskogo zoovetinstituta.
(Brucellosis in sheep)

DYMKOV, A. M.

USSR/Electricity - Transformers, Design Jan 52

"Calculation of Single-Phase Low-Power Transformers," A. M. Dymkov, Engr

"Rabochiy Energetik" No 1, pp 29-33

Gives instructions for calcn and assembly of single-phase 100-500 va transformers with natural air cooling. Presents numerical example of calcn.

206T48

DYMKOV, A.M., inzhener; FINGERIT, Sh.Ye., inzhener.

Transformer installation for tapping power from coupling capacitors on 400 kv transmission lines. Vest. elektroprom. 27 no.10: 4-7 O '56. (MLRA 10:9)

1. Moskovskiy transformatornyy zavod imeni V.V. Kuybysheva.
(Electric capacitors) (Electric transformers)
(Electric power distribution)

DYMKOV, A.M., inzhener; FINGERIT, Sh.Ye., inzhener.

Calculation of autotranformers. Energetik 4 no.12:31-33 D '56.
(Electric transformers) (MLRA 10:1)

DYNKOV, A.M., inzhener; FINGERIT, Sh.Ye., inzhener.

Waterproof and splashproof air-cooled transformers. Vest. elektroprom. 27 no.9:58-63 S '56. (MLRA 10:9)

1. Moskovskiy transformatornyy zavod imeni V.V.Kuybysheva.
(Electric transformers)

DYMKOV, A.AM., inzhener; FINGERIT, Sh.Ye., inzhener.

Line power transformer of the OM on 10 kilovolt type. Avtom., telem. i sviaz' no.4:10-12 Ap '57. (MLRA 10:5)
(Electric transformers)

DYMKOV, A.M., inzhener; FINGERIT, Sh.Ye., inzhener.

Calculation of single-phase transformers with capacities up to 10 kva and natural air cooling. Energetik 5 no.1:33-38 Ja '57. (MLRA 10:2)

(Electric transformers)

DYMKOV, A.M., inzhener; FINGERIT, Sh.Ye., inzhener.

Type NKF-400 voltage transformers. Vest. elektroprom. 28 no.3:21-23 Mr '57. (MLRA 10:4)

1. Moskovskiy transformatornyy zavod.
(Electric transformers)

DYMKOV, A. M.

The "ARM-250" autotransformer for television and radio receiver power supply. Radio no.10:44 O '57. (MIRA 10:10)
(Electric transformers)

DYMKOV, A.M., inzhener; FINGERIT, Sh.Ye., inzhener.

Significance of the maximum load of voltage transformers outside the classes of accuracy. Elek. sta. 28 no.6:92 Je '57. (MLRA 10:8)
(Electric transformers)

DYMKOV, A.M., inzh.; FINGERIT, Sh.Ye., inzh.

Ten kv. single-phase oil power line transformers. Avtom., telem. i sviaz' no.4:10-12 Ap '57. (MIRA 11:4)
(Electric transformers)

SOV/28-58-5-5/37

AUTHOR: Dymov, A.M., Professor, Doctor of Chemical Sciences

TITLE: Scientific -Technical Control of the Quality of Industrial Materials (O nauchno-tekhnicheskoy ekspertize kachestva promyshlennykh materialov)

PERIODICAL: Standardizatsiya, 1958, Nr 5, pp 23 - 24 (USSR)

ABSTRACT: The scientific and technical control of industrial materials, over whose quality there is some dispute, is at present carried out by various research institutes. Since the research institute in question must be a completely disinterested party in the production or processing of the material, and since the normal routine commitments of the research institutes are very pressing, quality control tests often have to be postponed, leading to delays in production. To preclude these difficulties the author suggests the establishment of an independent Inter-Agency quality

Card 1/2

Scientific -Technical Control of the Quality of Industrial Materials

Control Institute which would undertake such work on behalf of the metallurgical, mechanical engineering, chemical and building industries. Apart from quality control the Institute could make valuable contributions to the development of standardization.

ASSOCIATION: Moskovskiy institut stali imeni I.V. Stalina (Moscow Institute of Steel imeni I.V. Stalin)

1. Materials--Quality control

AUTHOR: Dymkov, A.M. 91-58-7-24/27

TITLE: The Calculation of the Magnetic Induction of Transformers and the Operation of Measuring Instruments with Increased Frequency (Raschët magnitnoy induktsii transformatorov i rabota izmeritel'nykh priborov pri povyshennoy chastote).

PERIODICAL: Energetik, 1958, Nr 7, p 38 (USSR)

ABSTRACT: P. Ya. Zyurin from Tunguda, Karelian ASSR, asks how to determine the required value of magnetic induction of transformers operating at an increased frequency, (200 cycles), and whether the frequency change influences the accuracy of measuring instruments. The author answers that transformers designed for 50 cycles can operate also at 60 cycles, but if the frequency is 200 cycles, they must be recalculated. The method of their recalculation is described. The use of special steel of the "E-44" grade (0.1 to 0.2 mm thickness) is recommended. If this steel is not available, steel of the "E-44" grade with 0.35 mm thickness can also be utilized. Measuring instruments, except the thermal ones, are influenced by the thermal ones, are influenced by the frequency change and must be recalibrated.

Card 1/1 1. Transformers--Performance 2. Transformers--Frequency factors 3. Transformers--Induction effects--Mathematical

BARDIN, I.P., akademik; DYKOV, A.M., prof., doktor khim.nauk; DIKUSHIN, V.I.; akademik; TSELIKOV, A.I.; OTLEV, I.A., inzh. (g. Khimki, Moskovskoy oblasti).; DEM'YANYUK, F.S., prof., doktor tekhn.nauk; RYBKIN, A.P., prof., doktor tekhn.nauk; YAKUSHEV, A.I., prof., dokt. tekhn.nauk; KIDIN, I.N., prof. doktor tekhn.nauk; KOROTKOV, V.P., dots., kand. tekhn.nauk; SHUKHGAL'TER, L.Ya., dots., kand.tekhn.nauk; KUKIN, G.N., prof., doktor tekhn.nauk.

Every specialist should know the principles of of standardization. Standartizatsiia 22 no.4:34-40 Jl-Ag '58. (MIRA 11:10)

1.Chlen-korrespondent AN SSSR (for TSelikov). 2.Predsedatel' tekhniko-ekonomicheskogo soveta Mosoblsovnarkhoza (for Rybkin). 3.Direktor Moskovskogo instituta stali imeni I.V. Stalina (for Kidin). 4.Direktor Moskovskogo vechernego mashinostroitel'nogo instituta (for Korotkov).
(Standardization--Study and teaching)

AUTHORS: Dymov, A.M., Professor, Lur'ye, Yu.Yu., Professor, Alimarin, I.P., Corresponding Member AS USSR, Feygel', L.V., Members of the Chair for Analytical Chemistry at the Moscow Institute for Steel 32-24-4-67/67

TITLE: Vladimir Nikolayevich Alekseyev (Deceased) (Vladimir Nikolayevich Alekseyev)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 4, pp. 512-512 (USSR)

ABSTRACT: On January 23, Vladimir Nikolayevich Alekseyev, author of many textbooks on analytical chemistry and an excellent pedagogue, died at the age of 70 after a prolonged sickness. From 1915 to 1954 Vladimir Nikolayevich Alekseyev worked at various institutes where he was concerned with investigations and pedagogic work in the field of analytical chemistry. During recent years he was appointed docent to the chair for analytical chemistry at the Moscow Institute for Steel. He is the author of 7 textbooks, among others of the first textbook on qualitative semimicroanalyses. His textbooks for technical high schools attained the number of 8 editions, and those for universities 11 editions. His works are distinguished by their high degree of methodical arrangement,

Card 1/2

Vladimir Nikolayevich Alekseyev

32-24-4-67/67

clear interpretations, and distinct formulations, which contributed largely towards promoting the self-education of students of analytical chemistry. Vladimir Nikolayevic Alekseyev will for a long time to come be held in high esteem by students and pedagogues, mainly by the wide use that is made of his excellent textbooks.

1. Chemists--USSR

Card 2/2

USCOMM-DC-60240

SOV/110-59-9-4/22

AUTHORS: Dymkov, A.M. and Fingerit, Sh.Ye., (Engineers)

TITLE: Capacitative Voltage Transformer type NDE-400

PERIODICAL: Vestnik elektropromyshlennosti,1959,Nr 9,pp 13-16(USSR)

ABSTRACT: The Moscow Transformer works has developed and manufactured a batch of capacitative voltage transformers type NDE-400. Standard capacitors are used in the capacitance voltage divider. A single-phase choke is connected in series with the primary winding of the single-phase three-winding transformer. The equipment is intended for connection in a star/star three-phase group; the tertiary windings used for earth protection are, as usual, connected in open delta. A schematic circuit diagram of the arrangement is given in Fig 1 and it is explained. The choke compensates for the capacitance of the capacitors, maintaining the transformer primary voltage as constant as possible. The capacitance of the capacitor string C_1 is 6200 picofarads; the value of the capacitance C_2, which governs the transformation ratio and hence the transformer size, was made 0.107 microfarads, so that the voltage ratio of the capacitative divider is 18.26. Then with the voltage transformer connected to a 400-kV supply the voltage on

Card 1/3

Capacitative Voltage Transformer type NDE-400

the primary winding of the actual transformer is 12.66 kV. The rated output of the transformer is 300 VA for class 1 accuracy, 600 VA for class 3 accuracy and 1200 VA for the output as limited by heating. Error calculations are given for class 1 accuracy. The transformer, with the choke installed above it, is oil-immersed. A schematic circuit diagram of the transformer and choke is given in Fig 2 and a photograph of the complete transformer in Fig 3. Details of core and coil construction are given; a shell-type core is used. The small box shown mounted on the side of the tank contains four resistances, each of 45 ohms, which are permanently connected to the secondary winding to provide a ballast load of 300 W. A disadvantage of the capacitative voltage transformer is that errors can arise because the capacitances diverge from their nominal values and are not constant. The tolerance of ± 5% on the capacitance value is too high for class 1 accuracy of transformer and should be reduced. Variations between the capacitances of nominally equivalent capacitors also hamper the provision of spares. The capacitative voltage transformer is also sensitive to

Capacitative Voltage Transformer type NDE-400

frequency variations and the requisite class of accuracy can be maintained only if frequency variations do not exceed ± 0.5 c/s. However, capacitative voltage transformers are much cheaper and lighter than ordinary ones and their construction is likely to be improved as a result of operating experience. As a transmission line is being altered from 400 to 500 kV, the works has developed and is commencing to produce capacitative voltage transformers type NDE-500 which use the same transformer device as in type NDE-400 except for changes in the winding data and the presence of an additional capacitor in the voltage divider.

Card 3/3

There are 3 figures.

DYMOV, A.M., doktor khimicheskikh nauk; KOZEL', L.Z., kand.khimicheskikh nauk

Colorimetric method as applicable to the analysis of metals and alloys. Sbor.Inst.stali no.39:450-461 '60. (MIRA 13:7)

1. Kafedra analiticheskoy khimii Moskovskogo ordena Trudovogo Krasnogo Znameni instituta stali im. I.V.Stalina.
(Metals--Analysis) (Colorimetry)

DYMKOV, A.M.

Circuits for connecting transformer windings, their special features and areas of application. Energetik 8 no.11:39 N '60. (MIRA 13:12)

(Electric transformers)

DYMKOV, A.M., inzh.

Use of 380/220 volt autotransformers. Energetik 8 no. 12:33 D '60. (MIRA 13:12)

(Electric transformers)

DYMOV, A.M.; KOZEL', L.Z.

Determining small contents of tungsten in titanium metal by colorimetry. Izv.vys.ucheb.zav.; chern.met. 4 no.5:192-197 '61. (MIRA 14:6)

1. Moskovskiy institut stali.
(Titanium--Analysis) (Tungsten--Analysis) (Colorimetry)

DYMKOV, A.M.

Special features and applications of dry electric transformers.
Energetik 9 no.1:37-38 Ja '61. (MIRA 16:7)

(Electric transformers)

DYMKOV, Aleksandr Mikhaylovich. Prinimal uchastiye KAGANOVICH, Ye.A.; KOMAR, M.A., red.; BORUNOV, N.I., tekhn. red.

[Voltage transformers] Transformatory napriazheniia. Moskva, Gosenergoizdat, 1963. 191 p. (Transformatory, no.10) (MIRA 16:10)

(Electric transformers)

Dymkov, S.S.

AUTHOR: Dymkov, S.S.

20-2-5/62

TITLE: The First Boundary Value Problem for Quasilinear Elliptical Equations.(Pervaya krayevaya zadacha dlya kvazilineynykh ellipticheskikh uravneniy)

PERIODICAL: Doklady Akad.Nauk SSSR, 1957, Vol. 115, Nr 2, pp. 22o-222 (USSR)

ABSTRACT: In the limited space of the Euclidean space $x=(x_1,\dots.x_n)$ the author examines the equation $Lu=-\sum_{i,j=1}^{n} a_{ij}(x,u)\frac{\partial^2 u}{\partial x_i \partial x_j}+\sum_{i=1}^{n} a_i(x,u)\frac{\partial u}{\partial x_i}+a(x,u)=0$ with the limiting condition $u|_S=0$, where S signifies the limit of the domain Ω. The author assumes that S consists of a finite number of twice differentiable surfaces. Some further assumptions are given. Together with 3 lemmata the following three theorems are given:

Theorem 1: For a certain $\alpha=\text{const}>0$ and for any real ξ_i the inequation $\sum_{i,j=1}^{n} a_{ij}(x,u)\xi_i\xi_j \geqslant \alpha\sum_{i=1}^{n}\xi_i^2$, $\max|\partial a_{ij}/\partial u \leqslant (\alpha e\sqrt{3}/12nC_1)$ may be satisfied, when $x\in\bar{\Omega}$ applies. When the here-given conditions are satisfied the above-described problem has the solution $u\in E_{\delta,2}$.

Theorem 2: Under the above-mentioned conditions the initially described problem has a solution $u\in E_{\delta,2}$, when $\beta \geqslant \frac{12n}{e\sqrt{3}}\frac{C_1}{\alpha_1}\max_{\sqrt{\beta}\Omega}$

Card 1/2 a(x,0)

The First Boundary Value Problem for Quasiliniear Elliptical Equations. 20-2-5/62

Theorem 3: When the conditions of theorems 1 or 2 are satisfied and when $\beta > C_3C_4$ applies, the solution of the problem posed here is unique. By the same methods analogous theorems for quasilinear elliptical equations of a more general type can be proved. There are 7 references, 2 of which are Slavic.

ASSOCIATION: Leningrad State University imeni A.A. Zhdanov. (Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova)

PRESENTED: December 29, 1956 by V.I.Smirnov, Academician.

SUBMITTED: December 25, 1956

AVAILABLE: Library of Congress.

Card 2/2

29641
S/146/61/004/004/005/015
D235/D306

9,7200

AUTHORS: Dymkov, S.S., Stroganov, R.P., and Yurevich, Ye.I.

TITLE: Investigating a type of non-linear dynamical systems with the aid of an electronic simulating device

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 4, 1961, 27 - 31

TEXT: This is a description of an electronic computer for solving the equation

$$\frac{d^2x}{dt^2} + a(x) = b(t) \qquad (1)$$

with the following conditions

$$x \geqslant 0; \qquad (2a)$$

the derivative $\frac{dx}{dt}$ changes its value and sign when $t = t_i$, $x(t_i) = 0$;

also,

$$\left.\frac{dx}{dt}\right|_{t=t_{i+0}} = -k \left.\frac{dx}{dt}\right|_{t=t_{i-0}}. \qquad (2b)$$

Card 1/3

Investigating a type of non-linear ...

The maximum frequency of changes b(t) was 10^5 1/sec. Coefficient k varied between 1 and 0. The main assembly of the computer consists of a dc amplifier, three dc integrators and two operational amplifiers. Standard analogue computer techniques were applied. However, three special electronic circuits are described: 1) A switching assembly controlling 4 polarized relays, introduces the conditions imposed on Eq. (1). 2) An indicating assembly which finds and fixes separate critical values of x. 3) A starting assembly switching the simulator to solving the regime at the time τ_0, where τ_0 is the smallest positive root of the equation $B(\tau) + A(0) = 0$. The starting assembly eliminates the error in the solution due to deviation of zeros in the integrators between the switching on and the beginning of the solution. The zeros of the amplifiers, the switching assembly and the stabilized self-resonant oscillation frequency should be periodically checked. The error of the simulating device does not exceed 5 - 10 %. There are 4 figures. This article was recommended by the Kafedra avtomatiki i telemeknaniki (Department of Automation and Telemechanics).

Card 2/3

29[illegible]
S/146/61/004/004/005/015
Investigating a type of non-linear ... D235/D306

ASSOCIATION: Leningradskiy politekhnicheskiy [illegible] im. M. I. Kalinina (Leningrad Polytech[illegible] Institute im. M. I. Kalinin)

SUBMITTED: March 9, 1961

X

Card 3/3

BRODIN, B.V.; DYMKOV, Yu.M.

Hard bitumens in uranium-bearing veins. Atom.energ. 16 no. 5:432-437 My '64. (MIRA 17:5)

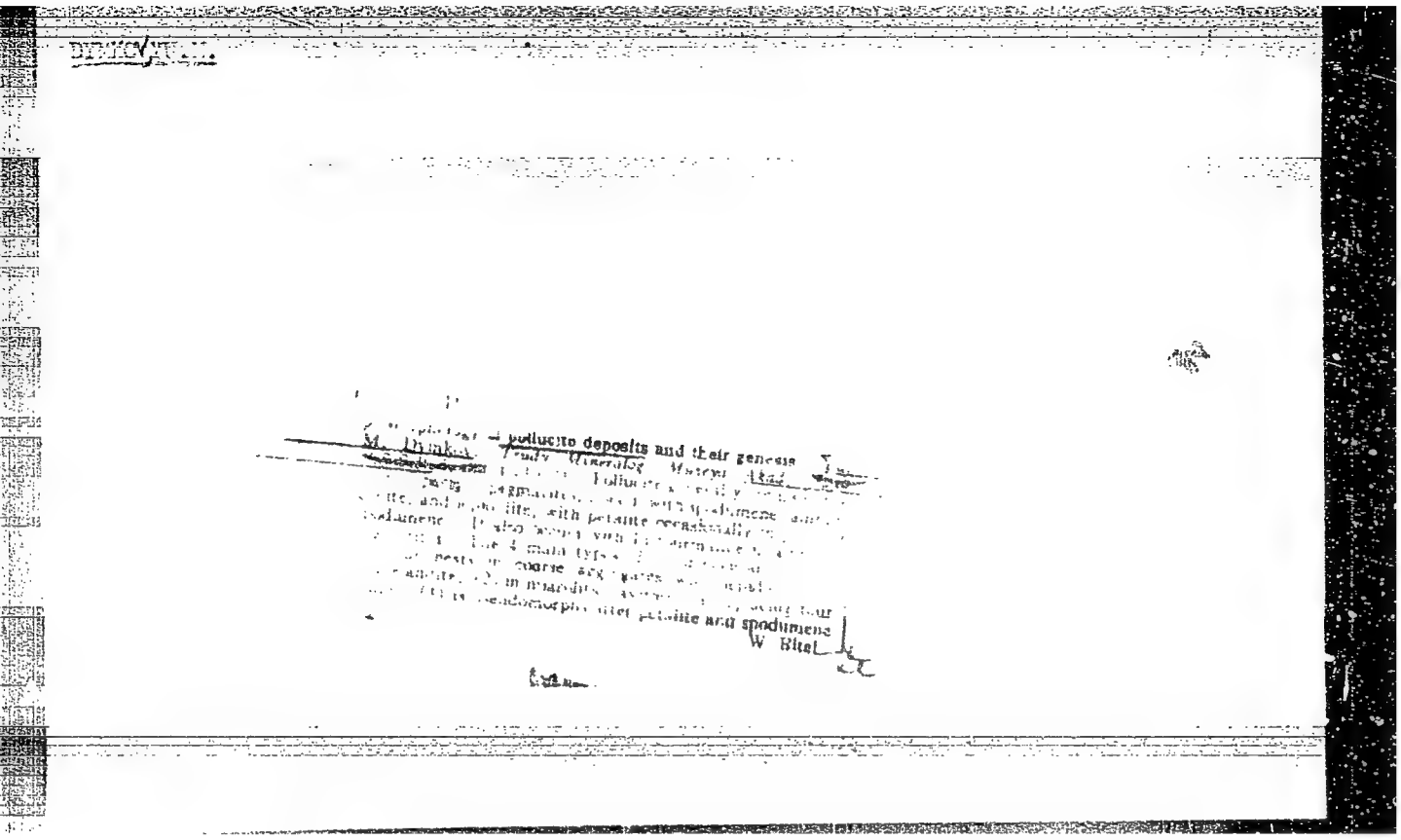
DYMKOV, Yu. M.

Dymkov, Yu M.- "On certain psudomorphs of spodumene," In the symposium: Nauch. raboty studentov gorno-metallurg. in-tov Moskvy. Moscow, 1949, p. 70-75

SO: U-4934, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

DYMKOV, Yu. M.

Graphic presentation of the mineral composition of compound pegmatite seams. Trudy Min. muz., No 3, 1951.



DYMKOV, Yu.M.

Fluorite crystals in the postskeletal growth stage. Trudy Min. muz. no.8:146-150 '57. (MIRA 11:3)
(Fluorite) (Crystallography)

DYMKOV, Yu.M.

Simultaneous and contact growth of crystals and spherulites. Trudy Min. muz. no.8:150-154 '57. (MIRA 11:3)
(Spherulites) (Crystals)

Dymkov, Yu. M.

RAFAL'SKIY, R.P.; DYMKOV, Yu.M.

Tubular pseudomorphoses of argentite as a substitute for native wire silver and the temperature of their formation. Dokl. AN SSSR 112 no.4:746-748 F '57. (MLRA 10:4)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR. Predstavleno akademikom D.S. Korzhinskim.

(Argentite)

Y.M. DYMKOV

"SOME PROBLEMS OF STRUCTURE AND GENESIS OF THE PITCHBLENDE" by Y. M. Dymkov

Report presented at 2nd UN Atoms-for-Peace Conference, Geneva, 9-13 Sept 1958

DYMKOV, Yuriy Maksimovich; PCHELINTSEVA, G.M., red.; MAZEL', Ye.I., tekhn.red.

[Uranium mineralization of the Erzgebirge] Uranovaia mineralizatsiia Rudnykh gor. Moskva, Gos.izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1960. 99 p. (MIRA 14:3)
(Erzgebirge--Uranium ores)
(Mineralogical chemistry)

DYMKOV, Yu.M.

Genesis of uraninite. Geokhimiia no.7:640-643 '60.
(MIRA 13:11)

(Uraninite)

DYMKOV, Yu.M.; BRODIN, B.V.

Reddening of minerals in uranium-bearing veins. Atom. energ. 10 no.1:35-42 Ja '61. (MIRA 13:12)
(Uraninite) (Hematite)

BRODIN, B.V.; DYMKOV, Yu.M.

Montroseite from hydrothermal veins of the Pribram deposit. Zap.-Vses.min.ob-va 90 no.6:653-659 '61. (MIRA 15:2)
(Pribram region--Montroseite)

DYMKOV, Yu.M.

Indications of the crystal growth of uraninite isolations.
Zap.Vses.min.ob-va 89 no.6:652-662 '61. (MIRA 15:5)
(Uraninite crystals)

DYMKOV, Yu. M.

Simultaneous and joint development of the separations of pichblende and associated minerals. Zap. Vses. min. ob-va 91 no.3:299-306 '62. (MIRA 15:10)

(Uraninite)

DYMKOV, Yu.M.; NAZARENKO, N.G.

Coffinite and the nature of pitchblende pseudocrystals. Geokhimiia no.4:304-312 '62. (MIRA 16:7)
(Coffinite) (Uraninite)

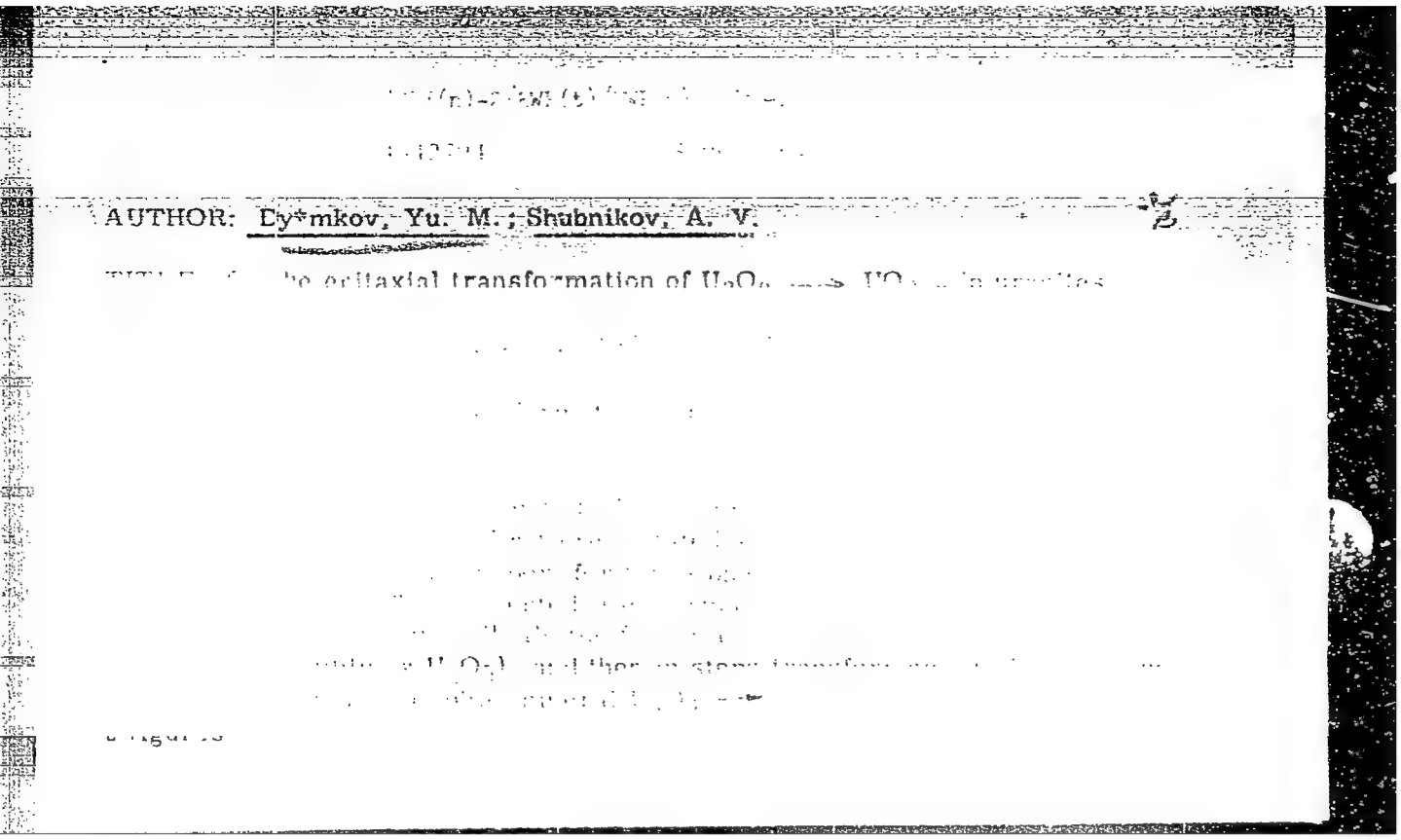
DYMKOV, Yu.M.; SOLOV'YEVA, F.I.; NAZARENKO, N.G.

Pseudospherulites of uraninite. Zap.Vses.min.ob-va. 92 no.2: 242-247 '63. (MIRA 16:5)

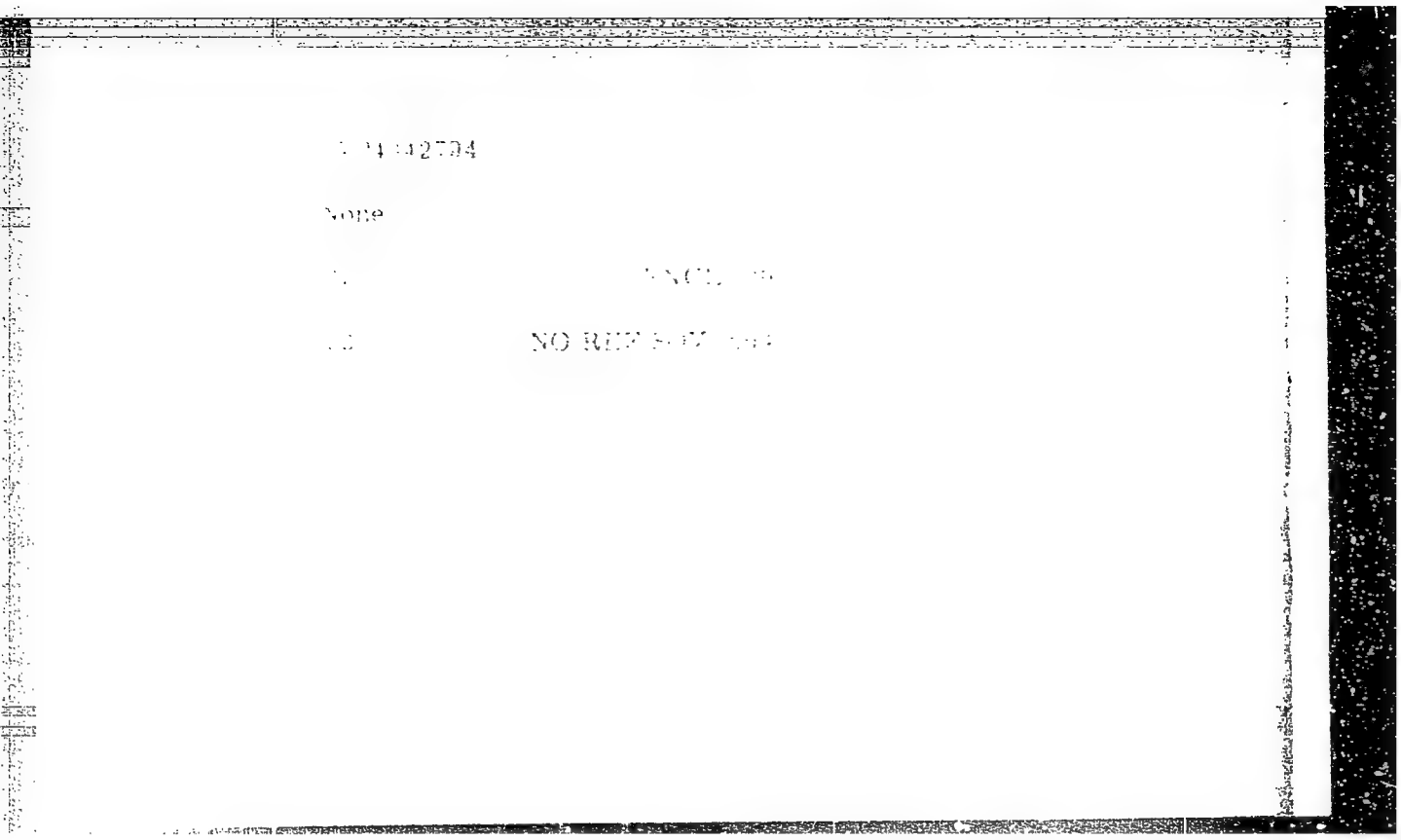
(Uraninite)

DYMKOV, Yu.M.

D.P.Grigor'yev's book "Ontogeny of minerals." Zap.Vses.min.ob-va 92 no.4:489-491 '63. (MIRA 17:2)



AUTHOR: Dy*mkov, Yu. M.; Shubnikov, A. V.



DYMKOVSKIY, N.V.

Experimental study of the effect of some charges on the sintering of a carbon-graphite composition prepared from highly dispersed channel carbon black. Zhur. prikl. khim. 36 no.11:2478-2482 N '63. (MIRA 17:1)

L 00317-66 EWP(e)/EWT(m)/EWP(w)/EPF(c)/EWP(i)/EWA(d)/T/EWP(t)/EWP(z)/ EWP(b)/ETC(m) MJW/BW/JD/WW/DJ/GS/WH

ACCESSION NR: AT5020434 UR/0000/65/000/000/0085/0088

AUTHORS: Dymkovskiy, N. V.; Likhtman, V. I.

TITLE: Friction and wear of graphite materials during operation in fluid contact face seals

SOURCE: AN SSSR. Nauchnyy sovet po treniyu i smazkam. Teoriya smazochnogo deystviya i novyye materialy (Theory of lubricating action and new materials). Moscow, Izd-vo Nauka, 1965, 85-88

TOPIC TAGS: lubricant, graphite, lubricant seal, wear seal

ABSTRACT: The friction and wear of graphite (compressive strength 1700 kg/cm^2, elastic modulus 1200 kg/mm^2, impact strength 3.5 kg cm, 17% porosity) rings with 12- and 18-mm wide contact surfaces rubbing against steel (2Kh13) rings with smooth surfaces and surfaces having 12, 36, and 60 radial grooves (6 mm wide, 0.4-0.7 mm deep) were investigated at a speed of 6.5 m/sec and maximum contact pressure of 19.5-25 kg/cm^2 (in water). Before testing, the rings were worn in by gradual increase of load, and then the wear and the friction torque were measured at maximum load for up to 50 hours of operation. It was found that the

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L 00317-66

ACCESSION NR: AT5020434

formation of transverse cracks in the steel rings and accompanying high graphite wear could be decreased by using soft steel (HRC16-20) and that the friction torque would decrease by a factor of 2-3 in that case. Tests with 12-mm wide graphite rings and radially grooved steel rings showed decreased cracking but resulted in high graphite wear, as it was found that only 30-50% of the graphite surface was in good contact. Increasing the contact width to 18 mm showed that this procedure, combined with the grooved rings, provided low friction torque, minimum friction cracks, and acceptably low graphite wear (0.2-1.5 micron/hr after run-in). The contact surfaces were found to be worn mirror-smooth, indicating that a water film was supp rting the load. Orig. art. has: 1 table.

ASSOCIATION: Nauchnyy sovet po treniyu i smazkam, AN SSSR (Scientific Committee on Friction and Lubrication, AN SSSR)

SUBMITTED: 22May65 ENCL: 00 SUB CODE: MF,MT

NO REF SOV: 008 OTHER: 000

Card 2/2

DYMKOVSKIY, N.V., inzh.; MILOVANOVA Yu.V., inzh.

Electrical contactors for relays used in railroad transportation.
Elektrotekhnika 36 no.10:33-34 O '65.
(MIRA 18:10)

S/119/63/000/003/006/010
B201/B308

AUTHORS: Dymkovskiy, V.P., Radchik, A.S. and Shtayger, Ye.V.

TITLE: A dynamometric pick-up

PERIODICAL: Priborostroyeniye, no. 3, 1963, 17-18

TEXT: A brief description of the mechanical construction of a linear resistive pressure transducer developed at the department of elements of machines of the Odesskiy politekhnicheskiy institut (Odessa Polytechnic Institute). The flexible element of the pick-up has a max. loading of 15 t, it is made of steel 70C3A (70S3A). The transducer converts the flexural deformation of the discordal part of the transducer into the radial deformation of two rings bonded rigidly to the body of the flexible element. Tensometric wire, covered with a layer of glue, is bonded to the cylindrical surface of each ring. The effects of certain factors in design on the transducer performance are tabulated. The pick-up is stated to be 3 times as sensitive as that with a loop and 9 times more sensitive than one with a spiral wire transducer. There are 2 figures and 1 table.

Card 1/1

DYMKOVSKIY, V.P.

Automatic regulation of the pressing force in friction transmissions. Nauch. zap. Od. politekh. inst. 39:27-32 '61
(MIRA 17:3)

DYMKS, Ye. F., Chief Veterinarian, Kokchetav Trust of Sovkhozes

Use of antireticular cytotoxic serum.

SO: Veterinariya, 23; 1; January 1946, Uncl.

TABCON

CZECHOSLOVAKIA

DIML, Borivoy, MVDr; MINARIK, Pavel, MVDr

Vratislavice near Liberka? (for both)

Brno, Veterinarstvi, No 12, December 1966, pp 543-547

"Occurrence of infectious bronchitis in large breeds of poultry."

CZECHOSLOVAKIA

MINARIK, Pavel, MVDr; DYML, Borivoj, MVDr; PETR, Otakar, MVDr

1. Vratislavice nad Nisou (for Minarik and Dyml); 2. Janska (for Petr)

Brno, Veterinarstvi, No 3 [March] 1967, pp 118-122

"Infectious nephritis in poultry."

KERCHER, A.M.; DYMNICH, A.Kh.; TRET'YAKOV, Ye.V., kand. tekhn. nauk

Quality of metal in heating open-hearth furnaces with natural gas. Met. i gornorud. prom. no.4:20-21 Jl-Ag '64. (MIRA 18:7)

1. DonNIIchermet.

L 02403-67 EWT(d)/FSS-2 GD

ACC NR: AT6022318 SOURCE CODE: UR/0000/66/000/000/0022/0025

67
B11

AUTHOR: Katayev, S. I.; Makoveyev, V. G.; Smirnov, V. V.; Dymnich, E. V.; Avanesov, G. A.

ORG: None

TITLE: Experimental converter of television signal standards

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio, 22d, 1966. Sektsiya televideniya. Moscow, 1966, 22-25

TOPIC TAGS: signal to noise ratio, TV converter, TV equipment, TV system, vidicon tube, video signal

ABSTRACT: The authors discuss the various problems involved in exchange of television programs due to the existence of four incompatible television signal standards. A brief description is given of an experimental converter developed by the television department of the Moscow Electrotechnical Institute of Communications in 1964-1965. This device converts a television signal from a system with a line frequency of 625 per second at 50 frames per second to a signal with 525 lines per second at 60 frames per second and vice versa. The basic unit in the converter is a device for rephotographing the image containing an optically interconnected kinescope and transmitting tube which operate in different scanning systems.

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L 02403-67

ACC NR: AT6022318 O

Since the transmitting tube in the camera used for the original photography is responsible for most of the distortions which appear in the converted image, particular attention is given to the requirements for this tube. Some of the specific requirements for this component are uniformity in the amplitude of the video signal on the working section of the target, proper transmission of information on the black level in the image and a target time constant of about 40 msec. This time lag in the transmitting tube reduces the amplitude of low frequency spurious modulation of the output signal, improves the signal to noise ratio and increases line "beat-frequency". It was found that vidicon tubes give the best results. The best lens for the intermediate optical system is the OKS1-50. The reproduction unit uses the 23 LK6I kinescope which gives a peak brightness of the order of 500-600 nit at an accelerating voltage of 25 kv. The size ratio of image conversion is 1:1. Provision is made for both automatic and manual suppression of spurious low-frequency modulation of the output signal at 1cps. The converter also contains input and output signal channels, a monitor for suppression of specific distortions and synchrogenerators for both standards. The output image has 7-8 differentiable gradations when there are 9 differentiable gradations in the input image. The signal to noise ratio at the output is 31 db for an input ratio of 27 db, i. e. a gain of 4 db. There is practically no flicker in the output image due to spurious modulation. Magnetic shielding of various units is used to eliminate the effect of a-c background from the 50 cps power supply. Orig. art. has: 1 table.

SUB CODE: 09/ SUBM DATE: 24Mar66

Card 2/2

DYMNIKOV, A.D.; FISHKOVA, T.Ya.; YAVOR, S.Ya.

System of four quadrupole lenses, analogous to axially symmetric lenses. Izv. AN SSSR. Ser. fiz. 27 no.9:1131-1134 S '63. (MIRA 16:9)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR.
(Electron optics)

KEL'MAN, V.M.; YAVOR, S.Ya.; DYMNIKOV, A.D.; OVSYANNIKOVA, L.P.

Achromatic quadrupole lenses. Izv. AN SSSR. Ser. fiz. 27 no.9: 1135-1138 S '63. (MIRA 16:9)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR.
(Electron optics)

S/057/63/033/004/004/021
B187/B102

AUTHORS: Dymnikov, A. D., Ovsyannikova, L. P., and Yavor, S. Ya.

TITLE: Systems of quadrupole lenses

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 33, no. 4, 1963, 393 - 397

TEXT: The paper contains the results of calculations for "pseudostigmatic" systems composed of two or four quadrupole lenses of different lengths and giving a point-shaped image of a point-shaped object. The magnification of the system, in the case of the doublet, differs in both planes. This difference can be eliminated in a four-lens system. Conditions for the doublet for point-point image

$$\frac{g+\frac{1}{\beta_2}\operatorname{th}\beta_2 d}{\beta_2 g\operatorname{th}\beta_2 d+1}=\frac{a+\frac{1}{\beta_1}\operatorname{tg}\beta_1 b}{\beta_1 a\operatorname{tg}\beta_1 b-1}-s. \qquad (4)$$

$$\frac{g+\frac{1}{\beta_2}\operatorname{tg}\beta_2 d}{\beta_2 g\operatorname{tg}\beta_2 d-1}=\frac{a+\frac{1}{\beta_1}\operatorname{th}\beta_1 b}{\beta_1 a\operatorname{th}\beta_1 b+1}+s. \qquad (5)$$

Card 1/3

Systems of quadrupole lenses

a denotes the distance of the point-shaped object from the first lens; b and d are the lengths of the lenses and s is their distance; g is the distance between the image and the second lens; β_1, β_2 characterize the optical power of the lenses, the first of which focuses and the second one diffracts. If (4) is valid the beam coordinates, at given g, are independent of the divergence of the beam in the x,y plane. In the image plane the linear image is parallel to the y-axis. Equation (5) gives the position of the linear image parallel to the x-axis. If (4) and (5) are fulfilled simultaneously, then the mapping is point-shaped. The magnifications are

$$\left.\begin{aligned} M_x &= \frac{\operatorname{ch}\beta_2 d + \beta_2 g \operatorname{sh}\beta_2 d}{\cos\beta_1 b - \beta_1 a \sin\beta_1 b}, \\ M_y &= \frac{\cos\beta_2 d - \beta_2 g \sin\beta_2 d}{\operatorname{ch}\beta_1 b + \beta_1 a \operatorname{sh}\beta_1 b}. \end{aligned}\right\} \qquad (6)$$

A table gives the calculated numerical values for different cases: $\frac{s}{b}$ = 0, 0.5, 1; $\frac{a}{b}$ = 0, 0.5, 1; $\frac{g}{b}$ = 1, 2, 4; $\frac{d}{b}$ = 1, 2, 4. If the distances

Card 2/3

S/057/63/033/004/004/021
B187/B102

Systems of quadrupole lenses

are the same but if the lens excitation is increased a point-shaped image can be obtained in the same plane but with different values of magnification. In a second table the pertinent numerical values are tabulated. The four-lens system is composed of two identical doublets arranged at a distance a + g in series. The field of the second doublet is turned by 90° with respect to the first one. The beam emerging in a again is focused at a distance g behind the second system. The magnification M varies from 1 to 27 and can be increased. Such systems of quadrupole lenses can be used also for electron or ion microscopes and permit reduction of spherical and chromatic aberration. There are 3 figures and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Leningrad Physicotechnical Institute imeni A. F. Ioffe, AS USSR)

SUBMITTED: April 9, 1962

Card 3/3

L 18357-63 EPA(b)/EWT(1)/BDS/EEC(b)-2/ES(w)-2 IJP(C)/SSD Pd-4/Pi-4/
Pab-4

ACCESSION NR: AP3003957 S/0057/63/033/007/0851/0858

70
69

AUTHOR: Dy*mnikov, A.D.; Yavor, S.Ya.

TITLE: Four quadrupole lenses as the analogue of an axially symmetric system

SOURCE: Zhurnal tekhnicheskoy fiziki, v.33, no.7, 1963, 851-858

TOPIC TAGS: electron optics, quadrupole lens

ABSTRACT: The possibility of using quadrupole lenses in electron-optical[21] imaging systems employing high-energy electrons or heavy particles presents certain advantages. Such lenses, however, suffer from what may be called an extreme form of axial astigmatism: the lenses are convergent in one plane and divergent in another. For a single pair of conjugate foci, this axial astigmatism can be compensated by using two quadrupole lenses so mounted that the convergence plane of one lens is the divergence plane of the other. In the present paper a family of optical systems is discussed in which four quadrupole lenses are employed in two symmetric pairs, and astigmatism is compensated at all axial points. These systems are thus analogous to truly axially symmetric lenses. The equations describing the behavior of a single quadrupole lens, on which the subsequent calculations are based, are taken

Card 1/2

L 18357-63
ACCESSION NR: AP3003957

from A.Septier (Advances in Electronics and Electron Physics, 14, 86, 1961). The four-lens axially stigmatic systems are discussed in detail, and it is found that both converging and divergin systems are possible. An experimental investigation of these systems is under way. Orig.art.has: 22 formulas and 7 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 04Jun62 DATE ACQ: 07Aug63 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 003

Card 2/2/

YAVOR, S. Ya.; DYMNIKOV, A. D.; FISHKOVA, T. Ya.; SHPAK, G. V.

"Electromagnetic achromatic systems."

report submitted to 3rd European Regional Conf, Electron Microscopy, Prague, 26 Aug-3 Sep 64.

UR AP4046683 S/0109/64/

AUTHOR: Dy[illegible]mnikov, A. D.; Fishkova, T. Ya.; Yavor, S. Ya.

TITLE: Electron-optical properties of a pseudo-axisymmetric [illegible] system

[illegible]tekhnika i elektronika, v. 9, no. [illegible] 1964, 1939-1941

quadrupole lens, axisymetric system

This is a continuation of an earlier a[illegible] [illegible], set of quadrupole lenses similar to an axisymmetric [illegible]. The set comprises four quadrupole lenses, [illegible] by 90° with respect to the field of the preceding [illegible]. [illegible] may be different from two identical inner lenses [illegible] assumed to be constant; outside the lens, equa[illegible] [illegible] the lenses are represented by equivalent [illegible] [illegible] tributions for the focal lengths and positions of the four [illegible] corresponding on the

ACCESSION NR: AP4046483

...oped. An experimental verifi...was conducted by the ...
... screens applied to a set of two electrostat... ...
... electron-optical bench (some details reported). Good agreement ...
... al and experimental results is claimed. ...
... formulas.

... Fiziko-tekhnicheskiy institut AN SSSR (IP... ...
... SSSR)

... 28Jun63

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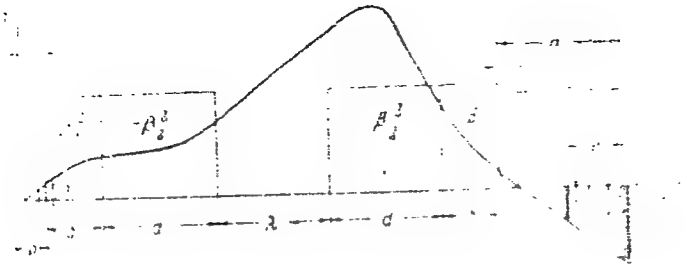
Card 2/3

ENCLOSURE: 1



Determination of optical characteristics of pseudo-axymmetrical quadrupole system by the method of two screens

EWT(1)/EPA(w)-2/EEC(t)/EEC(b)-2/EWA(m)-2 Pab-10 ASD(a)-5/AS(mp)-2/
EWL/SSD/ESD(dp)/ESD(ge)/ESD(t)
AP4045286 S/0067/64/034/009/1711/1714

AUTHOR: Dymnikov, A.D.; Fishkova, T.Ya.; Yavor, S.Ya.

TITLE: Spherical aberration of a combined electrostatic and magnetic quadrupole lens

Zhurnal tekhnicheskoy fiziki, v.34, no.9, 1964, 1711-1714

electron optics, spherical aberration, magnetic lens, quadrupole lens

The authors and collaborators have previously described a combined electric and magnetic quadrupole lens that can be made achromatic by proper choice of the electric to the magnetic field (ZhTF 31,1459,1961; 33,368,1963; In the present short communication they discuss the spherical aberration converging plane of a lens of this type for which the field configuration is two-dimensional, i.e., for which the fields are independent of one Cartesian coordinate, the axis of which serves as the axis of the lens. The trajectory equation taken from Yu.V.Vandakurov (ZhTF,27,1850,1957), and it is noted that results as written by A.Septier (C.R. 256,2325,1963) contain an error. The aberration in the first Gauss plane, $-d/f \tan^3 i$ (where d is the distance from plane of the trajectory from the axis, f is the focal length, and i is

...on of the trajectory at the object point) was found t... 1/2 for an ... lens, 3/16 for a magnetic lens, 1/4 for the achromatic version, and ... ratio of the electric to the magnetic field is such as to minimize ... aberration. The spherical aberration was found to be less by a fac- ... plane of least confusion than in the Gauss plane. Orig.art.has: 22 ... figures.

... Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physi- ... Institute, AN SSSR)

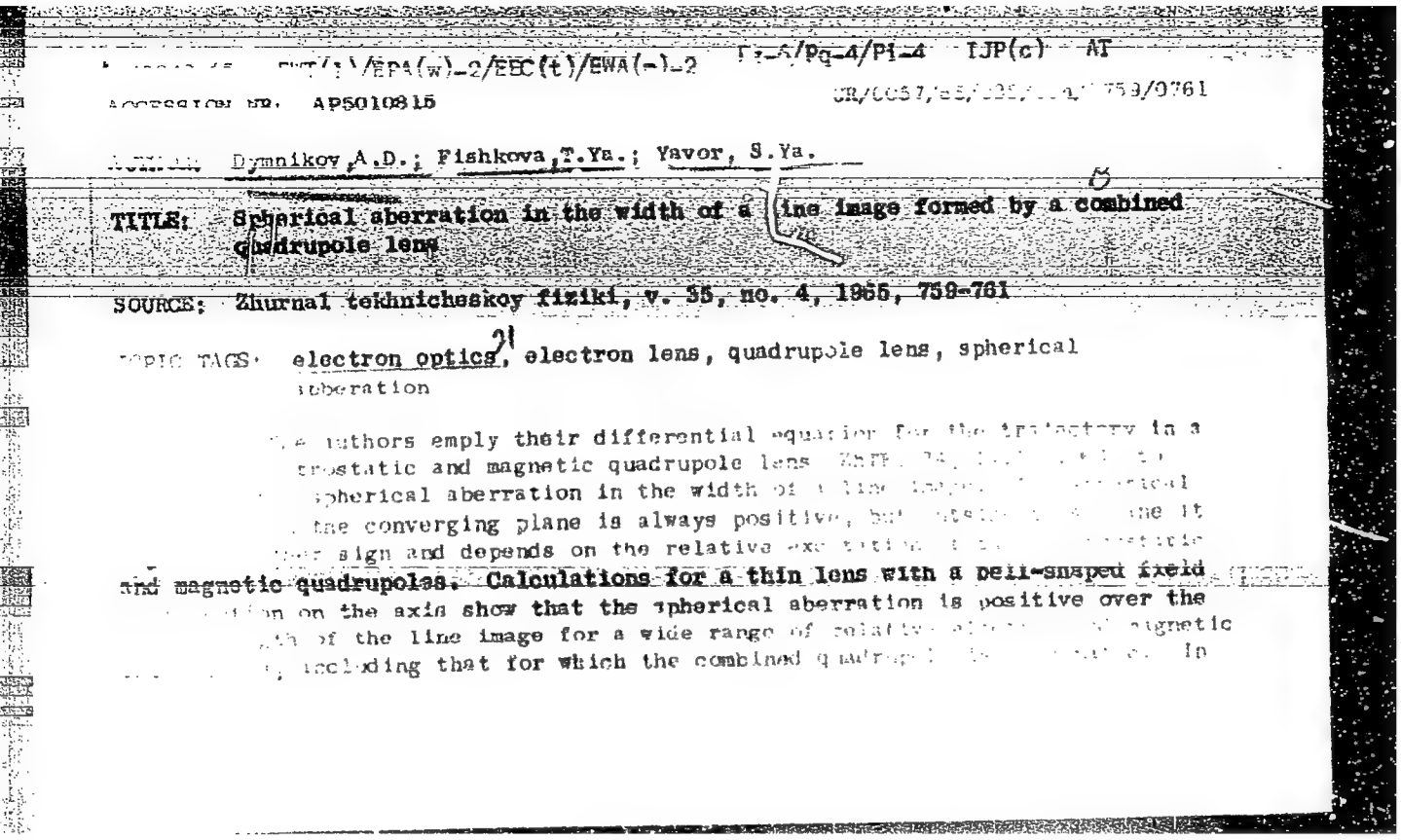
... Dec63 ENCL: 00

..., OP NR REF SOV: 003 OTHER: 001

DYMNIKOV, A.D.; YAVOR, S.Ya.

Systems of successively arranged electrostatic and magnetic quadrupole lenses with zero-point and negative chromatic aberration. Zhur.tekh.fiz. 34 no.11:2008-2014 N '64. (MIRA 18:1)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.



EWT(l)/EPA(w)-2/EEC(t)/EWA(m)-2 Pz-6/Pq-4/Pi-4 IJP(c) AT

ACCESSION NR: AP5010815 UR/0057/65/035/004/0759/0761

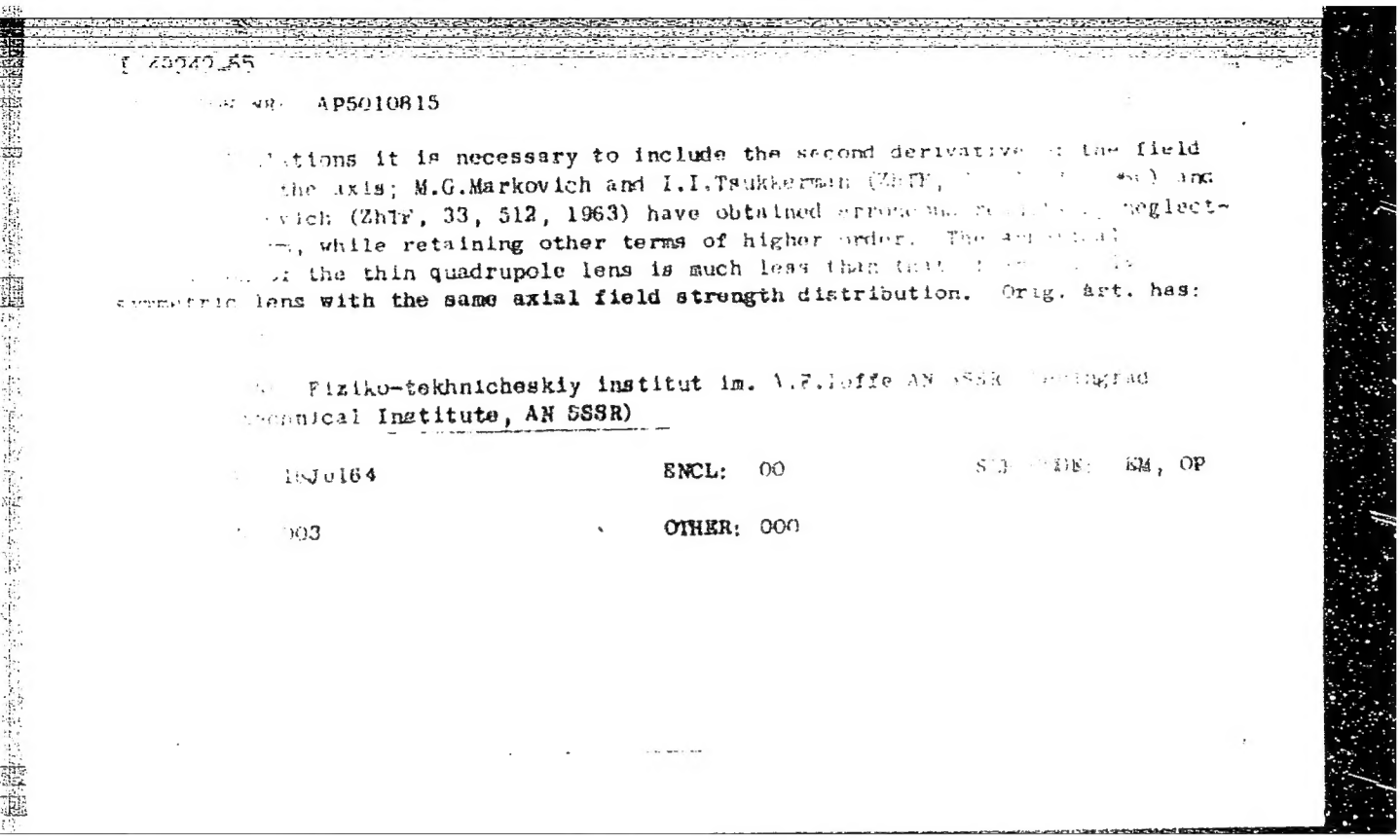
AUTHOR: Dymnikov, A.D.; Fishkova, T.Ya.; Yavor, S.Ya. 8

TITLE: Spherical aberration in the width of a line image formed by a combined quadrupole lens

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 4, 1965, 759-761

TOPIC TAGS: electron optics, electron lens, quadrupole lens, spherical aberration

The authors emply their differential equation for the trajectory in a [illegible] electrostatic and magnetic quadrupole lens [illegible] spherical aberration in the width of a line image [illegible] spherical [illegible] the converging plane is always positive, but [illegible] the it [illegible] sign and depends on the relative [illegible] electric and magnetic quadrupoles. Calculations for a thin lens with a bell-shaped field [illegible] on the axis show that the spherical aberration is positive over the [illegible] of the line image for a wide range of relative [illegible] magnetic [illegible], including that for which the combined quadrupole [illegible]. In



L 43949-65

ACCESSION NR: AP5010815

...tions it is necessary to include the second derivative ... the field ... the axis; M.G.Markovich and I.I.Tsukkerman (ZhTF, ...) and ...vich (ZhTF, 33, 512, 1963) have obtained ... neglecting ..., while retaining other terms of higher order. The ... of the thin quadrupole lens is much less than ... symmetric lens with the same axial field strength distribution. Orig. art. has:

... Fiziko-tekhnicheskiy institut im. A.F.Ioffe AN SSSR (Physicotechnical Institute, AN SSSR)

SUBMITTED: 18Jul64 ENCL: 00 SUB CODE: EM, OP

NO REF SOV: 003 OTHER: 000

YAVOR, S.Ya.; DYMNIKOV, A.D.; OVSYANNIKOVA, L.P.

Experimental study of a quadrupole lens with zero or negative chromatic aberration. Zhur. tekh. fiz. 39 no.1:99-104 Ja '64.(MIRA 17:1)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

ACCESSION NR: AP4012966 S/0020/64/154/004/0821/0823

AUTHORS: Yavor, S. Ya.; Dy*mnikov, A.D.

TITLE: Achromatic multipolar lens

SOURCE: AN SSSR. Doklady*, v. 154, no. 4, 1964, 821-823

TOPIC TAGS: optics, electron optics, lens, achromatic lens, multipolar lens, achromatic multipolar lens electrostatic field, octupole lens

ABSTRACT: An achromatic multipolar lens consists of combined electrostatic and magnetic lenses. The planes of symmetry of the electrostatic field are matched with the antisymmetry planes of the magnetic field, whereupon the forces acting on the charged particle in these planes are directed in opposition to each other. The distribution of the electrostatic φ and magnetic ω potentials can be obtained from the expression for a certain potential ψ which is periodic with respect to the angle ϑ

Card 1/5

ACCESSION NR: AP4012966

$$\psi(r, \vartheta, z) = \sum_{m=0}^{\infty} \sum_{\nu=0}^{\infty} (-1)^{\nu} \frac{m!}{4^{\nu} \nu! (m+\nu)!} r^{m+2\nu} [\Phi_m^{(2\nu)} \cos m\vartheta + \Omega_m^{(2\nu)} \sin m\vartheta]. \quad (1)$$

In this case, Φ_m and Ω_m are certain functions dependent upon γ. If the fields have N planes of symmetry (2N electrodes or terminals), then the distribution of the potential must satisfy the following conditions (with symmetrical excitation)

$$\psi\left(\vartheta \pm 2k \frac{\pi}{N}\right) = \psi(\vartheta) \quad (2)$$

$$\psi\left[\vartheta \pm (2k+1) \frac{\pi}{N}\right] = -\psi(\vartheta), \quad k = 0, 1, 2, \ldots \quad (3)$$

$$m = N(2n-1), \quad n = 1, 2, \ldots$$

In connection with a varying distribution of the electrostatic and magnetic fields with respect to the coordinate system, we can write

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